

Certificate of Analysis

Submission Reference: Avocado Products**Final Report****Kirill Lagutin**
Callaghan Innovation
PO Box 30-144
Lower Hutt
Wellington 5040
New Zealand

PO Number: 111807

Report Issued: 12-Jan-2021

AsureQuality Reference: **20-356741**

Sample(s) Received: 24-Dec-2020 07:15

Testing Period: 29-Dec-2020 to 12-Jan-2021

Date of analysis is available on request.

Sampled By: Campbell Ellison

Results

The tests were performed on the samples as received.

Customer Sample Name: Freeze-Dried Hass Avocado Flesh Powder**Lab ID:** 20-356741-1**Sample Description:** Freeze-Dried Hass Avocado Flesh Powder**Batch/Lot No.:** 7/12/20 1**Sample Condition:** Acceptable

Test	Result	Unit	Method Reference
Ash *	5.6	% m/m	AsureQuality Method
Dietary Fibre	14.9	% m/m	AOAC 991.43
Moisture *	1.2	% m/m	AsureQuality Method
Protein	4.44	% m/m	via Kjeldahl
Histidine (Total) *	107	mg/100 g	AsureQuality Method (UHPLC)
Hydroxyproline (Total) *	79.7	mg/100 g	AsureQuality Method (UHPLC)
Taurine (Total) *	<2.00	mg/100 g	AsureQuality Method (UHPLC)
Arginine (Total) *	207	mg/100 g	AsureQuality Method (UHPLC)
Serine (Total) *	249	mg/100 g	AsureQuality Method (UHPLC)
Glycine (Total) *	210	mg/100 g	AsureQuality Method (UHPLC)
Aspartic acid (Total Asparagine + Aspartic acid) *	384	mg/100 g	AsureQuality Method (UHPLC)
Glutamic acid (Total Glutamine + Glutamic acid) *	524	mg/100 g	AsureQuality Method (UHPLC)
Threonine (Total) *	190	mg/100 g	AsureQuality Method (UHPLC)
Alanine (Total) *	212	mg/100 g	AsureQuality Method (UHPLC)
Proline (Total) *	196	mg/100 g	AsureQuality Method (UHPLC)
Lysine (Total) *	262	mg/100 g	AsureQuality Method (UHPLC)
Tyrosine (Total) *	152	mg/100 g	AsureQuality Method (UHPLC)
Methionine (Total) *	52.1	mg/100 g	AsureQuality Method (UHPLC)
Cystine (Total Cysteine + Cystine) *	52.6	mg/100 g	AsureQuality Method (UHPLC)
Valine (Total) *	252	mg/100 g	AsureQuality Method (UHPLC)
Isoleucine (Total) *	199	mg/100 g	AsureQuality Method (UHPLC)
Leucine (Total) *	329	mg/100 g	AsureQuality Method (UHPLC)
Phenylalanine (Total) *	192	mg/100 g	AsureQuality Method (UHPLC)
Tryptophan (Total) *	53.9	mg/100 g	AOAC 2017.03

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Report Number: 2211852

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Test	Result	Unit	Method Reference
Thiamine Hydrochloride	0.11	mg/100 g	EN14122: 2003 (Committee for European Normalisation)
Total Vitamin B6	1.59	mg/100 g	Food Chemistry, Volume 48 (1993), Journal of Chromatography. Volume 463 (1989), Journal of Food Science - Volume 58 (1993).
Total Vitamin B2	0.32	mg/100 g	Food Chemistry, Volume 23, JAOAC Volume 62 (1979)
Total Vitamin B3	5.19	mg/100 g	Journal of Chromatography, Volume 301 (1984)
Vitamin C *	25.7	mg/100 g	AOAC 2012.22
Vitamin A	<3	µg/100 g	Methods for the Determination of Vitamins in Food - Recommended by COST 91 (1986)
Vitamin E	6519	µg/100 g	Methods for the Determination of Vitamins in Food - Recommended by COST 91 (1986)
Palmitic C16:0	10230	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Palmitoleic C16:1	4450	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Stearic C18:0	270	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Oleic C18:1n-9	32960	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Linoleic C18:2n-6	8430	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Alpha Linolenic C18:3n-3	400	mg/100 g	AsureQuality Method (Based on JAOCS, 62 (1985))
Total Sugar	0.9	% m/m	AsureQuality Method (GLC)
Vitamin B5 (Pantothenic Acid) *	1440	µg/100 g	AOAC 2012.16
Folic Acid *	<1.00	µg/100 g	AOAC 2013.13
Fat SBR *	65.1	% m/m	AsureQuality Method
Arsenic *	<0.02	mg/kg	AsureQuality Method (ICP-MS)
Cadmium *	0.045	mg/kg	AsureQuality Method (ICP-MS)
Mercury *	<0.01	mg/kg	AsureQuality Method (ICP-MS)
Lead *	<0.01	mg/kg	AsureQuality Method (ICP-MS)
Calcium	30	mg/100 g	AsureQuality Method (ICP-OES)
Copper	2.0	mg/100 g	AsureQuality Method (ICP-OES)
Iron	2.1	mg/100 g	AsureQuality Method (ICP-OES)
Magnesium	75	mg/100 g	AsureQuality Method (ICP-OES)
Manganese	0.49	mg/100 g	AsureQuality Method (ICP-OES)
Sodium	47	mg/100 g	AsureQuality Method (ICP-OES)
Zinc	1.9	mg/100 g	AsureQuality Method (ICP-OES)

Analysis Summary

Auckland Laboratory

Analysis	Method	Accreditation	Authorised by
Ash			
GC-ASH-01, 01-IN_HOUSE_METHOD	AsureQuality Method	Not Accredited	Shivanjani Chand
Dietary Fibre (by Ankom Autoanalyser)			
GC-FIBR01, 03-ANKOM	AOAC 991.43	IANZ	Rishi Kumar
Moisture			
GC-MOIS07, 04-IN_HOUSE_METHOD	AsureQuality Method	Not Accredited	Mohammed Bhamji
Protein			
GC-PROT03, 13-VIA_NITROGEN	via Kjeldahl	IANZ	Mohammed Bhamji
Starch (Boehringer)			
GC-STAR02, 01-DEFAULT	Boehringer Mannheim Methods of Biochemical Analysis and Food Analysis (1987)	Not Accredited	Gita Nand
Amino Acid Profile			
MN-AAP-08, 02-FOOD	AsureQuality Method (UHPLC)	Not Accredited	Pratika Bansal
Total Tryptophan			
MN-TRP-04, 02-OTHER	AOAC 2017.03	Not Accredited	Pratika Bansal
Vitamin B1			
MN-VITB13, 01-DEFAULT	EN14122: 2003 (Committee for European Normalisation)	IANZ	Anthony Faleatua
Vitamin B6			
MN-VITB14, 01-DEFAULT	Food Chemistry, Volume 48 (1993), Journal of Chromatography. Volume 463 (1989), Journal of Food Science - Volume 58 (1993).	IANZ	Rosely Bourke
Vitamin B2			
MN-VITB15, 01-DEFAULT	Food Chemistry, Volume 23, JAOAC Volume 62 (1979)	IANZ	Naleen Raj
Vitamin B3			
MN-VITB16, 01-DEFAULT	Journal of Chromatography, Volume 301 (1984)	IANZ	Rosely Bourke
Ascorbic Acid			
MN-VITC06, 01-FOOD_POWDERS	AOAC 2012.22	Not Accredited	Shipra Gaur
Vitamin A and E			
MN-VTAE01, 01-VITAMIN_A_E	Methods for the Determination of Vitamins in Food - Recommended by COST 91 (1986)	IANZ	Zheng Yu Wang
Fatty Acid Profile			
MN-FAP-02, 01-DEFAULT	AsureQuality Method (Based on JAOCS, 62 (1985))	IANZ	Radhika Pillay
Sugar Profile			
MN-SUGR01, 02-SUGAR_PROFILE	AsureQuality Method (GLC)	IANZ	Josieka Lal
Pantothenic Acid			
MN-VITB36, 01-PANT_ACID	AOAC 2012.16	Not Accredited	Dhruv Pathak
Folate			
MN-VITB37, 03-OTHER	AOAC 2013.13	Not Accredited	Dhruv Pathak
Fat (SBR)			
GC-FSBR01, 07-IN_HOUSE_METHOD	AsureQuality Method	Not Accredited	Mohammed Bhamji
ICP-MS Routine			
TR-ICPM01, 01-DEFAULT	AsureQuality Method (ICP-MS)	Not Accredited	Veebha Waghela
Instrumental Analysis of Prepared Samples By ICP-OES For Macro Elements			
TR-ICPO02, 01-DEFAULT	AsureQuality Method (ICP-OES)	IANZ	Shaheen Prasad

Any tests marked with * are not accredited for specific matrices or analytes.

Results that are prefixed with '<' indicate the lowest level at which the analyte can be reported, and that in this case the analyte was not observed above this limit.

Bansal

Pratika Bansal
Laboratory Supervisor



Bhamji

Mohammed Bhamji
Analyst



Chand

Shivanjani Chand
Analyst



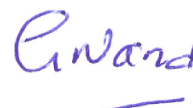
Dhruv Pathak
Technical Customer Champion



Anthony Faleatua
Laboratory Technician



Shipra Gaur
Laboratory Supervisor



Rishi Kumar
Scientific Analyst




Josieka Lal
Analyst



Gita Nand
Laboratory Analyst



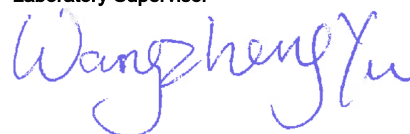
Radhika Pillay
Analyst



Shaileen Prasad
Supervisor



Naleen Raj
Laboratory Supervisor



Rosely Bourke
Laboratory Supervisor

Veebha Waghela
Laboratory Analyst

Zheng Yu Wang
Analyst

Certificate of Analysis

Submission Reference: Avocado Flesh Powder
Final Report**Kirill Lagutin**
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PO Box 30-144
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Report Issued: 26-Dec-2020**AsureQuality Reference:** 20-351827**Sample(s) Received:** 19-Dec-2020 08:10**Testing Period:** 19-Dec-2020 to 26-Dec-2020

Date of analysis is available on request.

Sampled By: Campbell Ellison

Results

The tests were performed on the samples as received.

Customer Sample Name: Freeze-Dried Hass Avocado Powder			Lab ID: 20-351827-1
Batch/Lot No.: 7/12/20		Sample Condition: Acceptable	
Test	Result	Unit	Method Reference
Salmonella	Not Detected	/25 g	ISO 6579-1:2017
Aerobic Plate Count (35°C)	26000	cfu/g	FDA BAM 3
Bacillus cereus (presumptive)	<10	cfu/g	ISO 7932: 2004
Faecal Coliforms (Thermotolerant Coliforms)	<0.3	MPN/g	APHA 9.8
Staphylococcus aureus	<10	cfu/g	FDA BAM 12

Analysis Summary

Auckland Laboratory

Analysis	Method	Accreditation	Authorised by
Salmonella			
PA-SALM11, 08-25G	ISO 6579-1:2017	IANZ	Jerry Zhou
Aerobic Plate Count (35°C)			
GM-APC-02, 02-35C_2D_CFU_G	FDA BAM 3	IANZ	Hao Jie (Alan) Xie
Bacillus cereus (presumptive)			
GM-BCIL05, 01-CFU_G	ISO 7932: 2004	IANZ	Melissa Young
Faecal Coliforms (Thermotolerant Coliforms)			
GM-FCOL01, 05-MPN_G_MDL0-3	APHA 9.8	IANZ	Jiemin (John) Ma
Staphylococcus aureus			
GM-STAP07, 01-CFU_G	FDA BAM 12	IANZ	Melissa Young

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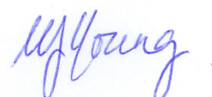
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Jiemin (John) Ma
Laboratory Analyst



Hao Jie (Alan) Xie
Scientific Analyst



Melissa Young
Scientific Analyst



Jerry Zhou
Scientist

Accreditation

